CHEMICAL ENGINEERING

NEWS

Presidential Candidates

Their views on science and technology
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News of the Week

■ **Use of genetically engineered organisms as pesticides, even in small-scale field tests, must be cleared by EPA.** **Page 4**

■ **Study of Alzheimer's disease gets boost with $3.5 million in grants to university research centers.** **Page 5**

■ **Permanent science programing development unit established for public television.** **Page 5**

■ **New Jersey residents get a whiff of malathion as storage tank blows cover, sending up a cloud of the vaporized insecticide.** **Page 5**

Business

An omnibus trade bill has emerged from House-Senate conference committee, appears certain to be approved. **Page 12**

Vinyl siding is headed for strong growth and will become most widely used siding material by end of decade. **Page 13**

Government

Environmental mediation conference focuses on changes that have evolved over the past 10 years in settling disputes. **Page 15**

Science

Synthesis of stereochemically formidable antibiotics achieved for Ph.D. thesis highlights new synthetic methods. **Page 17**

Technology

Chemical mechanisms of wood digestion are yielding to research on chemistry of anthraquinone pulping. **Page 20**

Books

"The Salaried Professional: How to Make the Most of Your Career" by Joseph Raelin gives general guidance in career planning. **Page 24**

Awards

ACS awardees have made gains in environmental science, gas phase chemistry, three-phase emulsions, organic and inorganic anions, structure and reactivity, and catalytic reactions. **Page 28**

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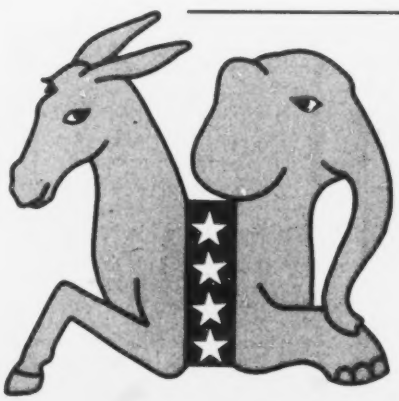

News Focus

Ronald Reagan and Walter Mondale give their views on science policy goals, science education, basic research, and technological innovation. **Page 6**

feit goods. This, too, is much less drastic than a last-minute proposal made in the House by Rep. Richard A. Gephardt (D.-Mo.). He wanted to graduate those three countries completely out of the preference system program, but his proposal was voted down in the House.

Included in the new trade bill is authority for the President to negotiate a free-trade arrangement with Israel. Chemical imports from Israel now are small, but the few companies that are affected by them consider them to be sensitive items. Some observers also fear that producers in other countries may ship their products through Israel to get free-trade benefits.

The bill is not as specific about negotiating a free-trade arrangement with Canada, but it does encourage it. Such an arrangement with Canada would be of more concern to the chemical industry because a sectoral free-trade deal covering petrochemicals already has been suggested and discussed (C&EN, June 25, page 19).

Chemical industry trade experts no doubt will welcome the provision of the new trade bill that gives the President authority to negotiate reductions in trade barriers affecting investments, services trade, and performance requirements. These subjects will be high on the U.S. priority list of topics when and if another round of multilateral trade talks get under way.

Missing, however, from the omnibus trade legislation approved by the conference committee are the tough provisions of H.R. 4784, the Trade Remedies Reform Act. This bill—the so-called Gibbons bill after Rep. Sam Gibbons (D.-Fla.) who introduced it—would have drastically expanded the scope of U.S. antidumping and countervailing duty laws. The original bill would have offered remedies against so-called downstream dumping, upstream subsidies, and natural resource subsidies.

The chemical industry was split in its attitude toward the Gibbons bill. Many multinational companies, fearing it could hurt their own foreign operations, opposed it. Others, particularly ammonia producers hurt by imports from Mexico, applauded it.

Earl Anderson, New York

Vinyl siding poised for major growth

Vinyl siding, a large market for polyvinyl chloride, is poised for a spurt of good growth and easily will become the most popular siding material by the end of the decade, according to Predicasts, a Cleveland, Ohio-based supplier of business information and market research.

According to a Predicasts market survey on single-ply and other roofing and siding markets, residential construction in 1983 consumed about 550 million sq ft, which ended up trailing brick use of 890 million sq ft, hardboard use of 720 million sq ft, aluminum use of 700 million sq ft, and plywood use of 650 million sq ft.

That lineup is expected to change dramatically through the mid-1990s, when vinyl siding will account for 1.3 billion sq ft, or more than 30% of all siding consumption. In 1983, vinyl made up just 14% of siding demand. Predicasts says that percentage will rise to about 23% in 1988.

To garner that share of the siding market, according to Predicasts, vinyl siding consumption will grow about 13% per year between 1983 and 1988. Growth will slow after that to an average of less than 4% per year. Meanwhile, total siding consumption will be growing at less than 2% per year between 1983 and 1988. Then demand actually will decline between 1988 and 1995, according to Predicasts, to the point that in 1988 consumption will be about 3% less than it had been seven years earlier.

Also, while vinyl siding consumption is enjoying healthy growth, many of its competitors will be victims of falling demand. Between 1983 and 1988, aluminum siding consumption likely will fall 3.4% per year, brick use 3.1% per year, steel use 1.9% per year, and hardboard and plywood use will remain essentially unchanged.

By 1995, the decline in these products will become more severe, according to the Predicasts survey, and only vinyl siding and miscellaneous materials will show any growth. Predicasts says the "other" category will show growth because of the introduction of composite materials such as waferboard and concrete.

Between 1983 and 1995, the roofing and siding market will be supported by modest levels of new housing construction, although less than those levels experienced during previous periods of rapid growth, and by continuing replacement and addition requirements.

The $1500, 109-page study also delves into the fragmentation of the market, in which no single firm holds a share of more than 7%. However, concentration does vary widely among segments, from highly fragmented in bricks to highly concentrated in hardboard production. In addition, the industry is shaped, according to the study, by the presence of large, diversified, and usually vertically integrated firms. □

Vinyl will have largest share of siding market by 1988

Millions of sq ft	Consumption			% average annual change		
	1983	1988	1992	1983–88	1988–95	1983–95
Aluminum	700	590	510	−3%	−2%	−3%
Steel	110	100	90	−2	−2	−2
Vinyl	550	1020	1300	13	4	7
Brick	890	760	570	−3	−4	−4
Hardboard	720	730	700	0	−1	0
Plywood	650	660	570	0	−2	−1
Lumber & other shingles	100	70	40	−7	−8	−7
Other	300	450	470	8	1	4
TOTAL SIDING	4020	4380	4250	2%	0%	1%

Source: Predicasts